

**REMARKS**

This amendment is responsive to the Office Action of May 14, 2008. Reconsideration and allowance of claims 1-20 are requested.

**The Office Action**

Claims 1-7, 11 and 12 stand rejected under 35 U.S.C. § 102 as being anticipated by Segawa (US 5,865,177).

Claims 8-10 and 13 stand rejected under 35 U.S.C. § 103 as being unpatentable over Segawa.

Claims 14-20 do not stand rejected on art and are understood to contain allowable subject matter.

**The 35 U.S.C. § 102 Rejection Based on Segawa Is Procedurally Improper**

The Examiner in the rejection is modifying the Segawa structure disclosed in light of Foo.

First, the Examiner has failed to make Foo of record raising ambiguity as to what Foo discloses or teaches.

Second, when modifying one structure in light of a second structure, particularly when the second structure is from a second reference, it is submitted that the rejection must meet the requirements set forth in 35 U.S.C. § 103.

**The Examiner Has Misinterpreted Foo**

As described in column 8, lines 49-57, of Segawa, Foo has a shield made of a copper film which is coated on the inside wall of the gradient coil. It is submitted that this is the standard RF shield used in substantially all bore-type MRI imagers to prevent RF fields from being transmitted into the gradient coils and inducing eddy currents.

This same paragraph further describes that the space between the RF shield and the RF coils is filled with "the material." "The material", it is submitted is the dielectric material which is used to correct the dielectric loading referenced at column 8, line 22.

Thus, it is submitted that the Examiner has erroneously interpreted the copper film of the RF shield as being "the material" which causes the described effect on the RF wave propagation. To the contrary, it is submitted that the copper foil referenced in Foo is used to block the propagation of  $B_1$  waves and if placed inside the RF coil would not achieve the propagation effects described in column 8. Rather, such copper film RF shield would either increase  $B_1$  in homogeneity or completely block the  $B_1$  field.

**The Claims Are Not Anticipated by Segawa**

Claim 1 calls for an electrically conductive layer disposed within the cavity. It is submitted that neither Segawa nor Foo disclose or fairly suggest or placing or disposing an electrically conductive material in the cavity. Rather, Segawa calls for a dielectric material (column 4, lines 58-59; column 5, line 64; column 6, line 14; column 6, line 38; column 9, line 57).

Foo analogously calls for a dielectric material to perform a dielectric loading correction. As indicated above, the copper foil described in Foo is the RF shield. It is submitted that placing an RF shield inside the RF coils is neither taught nor fairly suggested by either Foo or Segawa. Rather, it is submitted that placing the RF shield in the bore would render the device inoperative for its intended purpose.

Further, it should be noted that Segawa describes using the dielectric gel analogous to a polarizer or lens in order to correct a distribution of the RF magnetic field (column 2, lines 58-62). Rather than calling for shaping the RF field, claim 1 calls for the electrically conductive material to have an electrical conductivity and thickness which renders a total electrical conductance in the xy-plane isotropic. Neither Foo nor Segawa teach or fairly suggest positioning electrically conductive material in the bore in such a manner that a total electrical conductance in the xy-plane is rendered isotropic.

Accordingly, it is submitted that claim 1 and claims 2-13, dependent therefrom, distinguish patentably and unobviously over Segawa as modified by Foo.

Claim 14 calls for rendering the conductance of a subject more symmetric. By contrast, Segawa is directed to focusing the RF field, analogous to a lens or polarizing plate. Segawa does not disclose nor suggest disposing electrically conductive

material in such a manner as to render the conductance of the subject more symmetric. Accordingly, it is submitted that claim 13 and claims 15-17, dependent therefrom, are not anticipated and distinguish patentably over the references of record.

Claim 18 calls for placing a strip of electrically conductive material along a subject such that a conductance of the subject in a transverse plane is made more isotropic. Segawa does not suggest placing a strip of electrically conductive material along a surface such that an electrical conductance of the subject in a transverse plane is made more isotropic. Rather, Segawa is concerned with shaping the RF field and does so with a dielectric gel and makes no suggestion that the electrical conductance in a transverse plane should be made more isotropic, much less that such improved isotropy should be achieved by placing a strip of electrically conductive material along a subject.

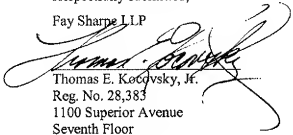
The copper foil of Foo, it is submitted, is the RF shield. It is submitted that neither Segawa nor Foo disclose or fairly suggest placing an RF shield along the subject. Accordingly, it is submitted that claim 18 and claims 19 and 20, dependent therefrom, distinguish patentably and unobviously over the references of record.

#### CONCLUSION

For the reasons set forth above, it is submitted that claims 1-20 are not anticipated by and distinguish patentably over the references of record. An early allowance of all claims is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, she is requested to telephone Thomas Kocovsky at (216) 861-5582.

Respectfully submitted,  
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